

Amendments to the Claims.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently amended) A method of producing a radiolabelled gallium complex by reacting a Ga^{3+} radioisotope in a suitable solvent with a macrocyclic bifunctional chelating agent, wherein said macrocyclic bifunctional chelating agent is linked to a targeting vector selected from the group consisting of proteins, glycoproteins, lipoproteins, polypeptides, glycopolypeptides, lipopolypeptides, peptides, glycopeptides, lipopeptides, carbohydrates, nucleic acids, oligonucleotides or a part, a fragment, a derivative or a complex of the aforesaid compounds and small organic molecules;
characterised in that the reaction is carried out using microwave activation at 80 to 120 W for 20 s to 2 min.
2. (Previously presented) The method according to claim 1 wherein the Ga^{3+} radioisotope is selected from the group consisting of $^{66}\text{Ga}^{3+}$, $^{67}\text{Ga}^{3+}$ and $^{68}\text{Ga}^{3+}$.
3. (Previously presented) The method according to claim 1 wherein the Ga^{3+} radioisotope is $^{68}\text{Ga}^{3+}$.
4. (Cancelled)
5. (Currently amended) The method according to claim 1 wherein the macrocyclic bifunctional chelating agent comprises hard donor atoms, preferably O and N atoms.
6. (Cancelled)

7. (Cancelled)
8. (Currently amended) The method according to claim 17 wherein the target vector is a peptide or oligonucleotide.
9. (Previously presented) The method according to claim 1 wherein the microwave activation is carried out at 90 to 110 W.
10. (Previously presented) The method according to claim 1 wherein the microwave activation is carried out for 30 s to 90 s.
11. (Previously presented) The method according to claim 3 wherein the $^{68}\text{Ga}^{3+}$ is obtained by contacting the eluate from a $^{68}\text{Ge}/^{68}\text{Ga}$ generator with an anion exchanger and eluting $^{68}\text{Ga}^{3+}$ from said anion exchanger.
12. (Previously presented) The method according to claim 11 wherein the $^{68}\text{Ge}/^{68}\text{Ga}$ generator comprises a column comprising titanium dioxide.
13. (Previously presented) The method according to claim 11 wherein the anion exchanger comprises HCO_3^- as counterions.
14. (Previously presented) The method according to claim 11 wherein the anion exchanger is an anion exchanger comprising quaternary amine functional groups, or the ion exchanger is a anion exchange resin based on polystyrene-divinylbenzene.
15. (Previously presented) The method according to claim 1 for the production of ^{68}Ga -radiolabelled PET tracers.

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16. (Withdrawn) Method according to claim 11 wherein the eluting $^{68}\text{Ga}^{3+}$ is in the picomolar to nanomolar range after the elution, and more preferably in a nanomolar to micromolar level.